

Application No. 09/651,754

Docket No. 20-0139

AMENDMENTS TO THE CLAIMS

1 (Currently Amended): A transceiver-processor building block for an electronic radio system multifunction slice, the building block comprising:

- a plurality of simultaneously operable bi-directional transceivers;
- a processor coupled to the transceivers;
- a local RF control bus inaccessible directly from outside the multifunction slice and coupled between the processor and the transceivers to provide control signals to the transceivers;
- a network bus coupled to the processor; and
- a network bus connector coupled to the network bus to provide direct accessibility to the network bus and, through it, the processor, from outside the multifunction slice, wherein multiple multifunction slices are interconnectable through the network bus, to provide increased functionality.

2 (Original): The building block of claim 1, further comprising an external control bus coupled to the processor and an external control bus connector providing direct accessibility to the external control bus from outside the multifunction slice.

3 (Cancelled).

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4 (Original): The building block of claim 1, wherein the network bus carries unencrypted information and is isolated from the local RF control bus.

5 (Original): The building block of claim 4, wherein the network bus is isolated from the local RF control bus with electromagnetic shielding.

6 (Original): The building block of claim 1, wherein the processor includes encryption and decryption support for each transceiver in the plurality of transceivers.

7 (Original): The building block of claim 1, further comprising encryption and decryption support circuitry coupled to the processor for each transceiver in the plurality of transceivers.

8 (Original): The building block of claim 6, wherein the encryption and decryption support includes at least one of KGV-8, KGV-10, KGV-11, KGV-23, KG-84A, KGR-96, KG-125, KY-58, and Havequick Applique encryption and decryption support.

9 (Original): The building block of claim 4, wherein the network bus transfers transmission coordination data and voice data into and out of the building block.

10 (Original): The building block of claim 3, wherein the local RF control bus carries tuning data for the plurality of transceivers.

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11 (Original): The building block of claim 10, wherein the local RF control bus carries intermediate frequency bandwidth information and intermediate frequency gain characteristics for the plurality of transceivers.

12 (Original): The building block of claim 2, wherein the external control bus carries antenna configuration data.

13 (Original): The building block of claim 2, wherein the external control bus carries antenna interferometer configuration data.

14 (Currently Amended): An electronic radio system multifunction slice for supporting a predetermined number of communication threads, the multifunction slice comprising:

an RF aperture interface;

a plurality of simultaneously operable bi-directional transceivers coupled to the RF aperture interface;

a processor coupled to the transceivers;

a local RF control bus inaccessible directly from outside the multifunction slice and coupled between the processor, the transceivers, and the RF aperture interface, to provide control signals from the processor to the transceivers and the RF aperture interface;

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a network bus coupled to the processor;

a network bus connector coupled to the network bus to provide direct accessibility to the network bus from outside the multifunction slice, wherein multiple multifunction slices are interconnectable through the network bus, to provide increased functionality; and

a backplane interface coupled to the processor, the backplane interface providing a backplane output and a backplane input.

15 (Original): The electronic radio slice of claim 14, further comprising an external control bus coupled to the local RF control bus and an external control bus connector providing direct accessibility to the external control bus from outside the multifunction slice.

16 (Original): The electronic radio slice of claim 14, wherein the local RF control bus is restricted to carrying control data information between the processor, the transceivers, and the RF aperture interface.

17 (Original): The electronic radio slice of claim 14, wherein the network bus carries unencrypted information and is isolated from the local RF control bus.

18 (Original): The electronic radio slice of claim 17, wherein the network bus transfers transmission coordination data and voice data into and out of the building

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block, the local RF control bus carries tuning data for the plurality of transceivers, and the external control bus carries antenna configuration data.

19 (Currently Amended): A method for operating a transceiver-processor building block in an electronic radio system multifunction slice, the method comprising:

providing a plurality of simultaneously operable bi-directional transceivers coupled to a processor;

communicating unencrypted data to the processor over a network bus coupled to the processor, the network bus coupled to a network bus connector providing direct accessibility to the network bus from outside the multifunction slice;

processing the unencrypted data to form control data; and

communicating the control data to the transceivers over a local RF control bus between the processor and the transceivers, the local RF control bus being inaccessible directly from outside the multifunction slice;

providing at least one additional electronic radio system multifunction slice; and

interconnecting the multifunction slices through the network bus.

20 (Original): The method of claim 19, further comprising the step of communicating antenna configuration data over an external control bus coupled to the local RF control bus to an antenna outside the multifunction slice.

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21 (Original): The method of claim 19, further comprising the step of electrically isolating the network bus from the local RF control bus.

22 (Original): The electronic radio slice of claim 21, wherein electrically isolating comprises electrically isolating with electromagnetic shielding.

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